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ABSTRACT

This report focuses on the nature of restructuring in a sample of Washington State schools, and the degree to which those changes improved student learning. The research attempted to distinguish between simply changing school or classroom practices and the broader concept of restructuring a school. A restructured school was defined as one that has undergone changes that reflect fundamental changes in school philosophy and practice, changes driven by a collaborative process and by clearly defined goals. Sixteen school districts in western Washington participated in the study, and 75 schools provided sufficient data for comparisons. The findings show that the degree to which schools attempted to implement the state-mandated restructuring process differs from school to school. Achievement gains were greater in the elementary and middle/junior high schools where restructuring had taken place compared to schools where it had not. The degree of restructuring was determined by a tool that measures the degree to which teachers, parents, and administrators have worked together to define what their school will be. Most of the schoolwide and classroom practices reflected national trends in school reform. Many classroom practices that have increased the most, such as the use of educational technology, had no relationship with achievement gains. Appendices include ths School Practices and Changes Questionnaire and participating districts and schools. Contains 21 references. (RJM)

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School Restructuring and Student Achievement in Washington State:

Research Findings on the Effects of House Bill 1209 and School Restructuring on Western Washington Schools.

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School Restructuring and Student Achievement in Washington State:

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January, 1999

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Executive Summary

School Restructuring and Student Achievement in Washington State:

Research Findings on the Effects of House Bill 1209 and School Restructuring on Western Washington Schools.

In 1993 Engrossed Substitute House Bill 1209 set in motion a series of activities throughout the State of Washington designed to change how and what students are taught and are expected to learn. The reform efforts within Washington State generally reflect the school restructuring efforts that are currently progressing at various speeds throughout the United States. The research reported here was conducted during 1997 and 1998, and focused on the nature of restructuring and specific changes that have taken place in a sample of Washington schools, and the degree to which those changes were related to increases in student learning.

Defining a restructured school. We chose to define a restructured school as one that has undergone changes that reflect second order or fundamental changes in school philosophy and practice, and where those changes are driven by a collaborative process and clearly defined goals. The *School Practices and Changes Questionnaire* (SPCQ) was designed specifically for this research to measure the nature and extent of changes that have taken place in the schools since 1993.

The questionnaire asks for teachers' perceptions of how state mandated school reform efforts have affected their school, their classroom, their own teaching, and their students. In addition, we considered these additional school variables in our research:

- School socio-economic status
- School ethnicity
- School size
- Specific school-wide practices
- Specific classroom practices
- Teacher perceptions of student learning
- Academic achievement—the school-wide results from the California Test of Basic Skills (CTBS) for 1993, 1996, and 1997.

The sixteen participating school districts were located in the Puget Sound region of Western Washington basically along the I-5 corridor both south and north of Seattle and on the Olympic Peninsula. In those analyses where the individual teacher was the unit of analysis, the sample consisted of 2,197 teachers from 111 schools. Seventy-five schools provided sufficient data for school comparisons and included 51 elementary, 14 middle/junior high, and 10 high schools.

SUMMARY OF FINDINGS

RESTRUCTURING

- Most schools have gone through some degree of restructuring, but elementary schools have experienced a higher level of fundamental change than have high schools.

- While many schools are changing, not all schools are making progress on restructuring. The large majority of schools, about 75%, are practicing some degree of collaborative decision making, while about 10% of the schools have experienced very little collaboration. Similarly, a large majority of schools have made changes that they believe are important and long lasting, but only about 10% of the schools report that these changes are

impacting their instruction significantly at this point.

- The degree of changes that are being made at this sample of schools is independent of an individual school's ethnic composition, but seems to be more common among schools with lower achieving and lower income students.

SCHOOL-WIDE PRACTICES

- Specific changes being made at the schools differ, but the most common changes at the elementary level are an emphasis on staff development activities, site-based councils and decision-making, parent volunteer in the schools, inclusion practices, formal parental involvement programs, a cooperative learning focus, outcome or performance based learning, and alternative assessment strategies.

- At the middle/junior high and high schools, the most common changes are an emphasis on staff development activities, site-based councils and decision-making, parent volunteer in the schools, inclusion practices, school to work transition programs, block scheduling or flexible time for courses, interdisciplinary team teaching, and formal parental involvement programs.

- The elementary schools with higher restructuring scores are more likely to have implemented a wide variety of schoolwide practices, including alternative assessment strategies, cooperative learning, staff development activities, recognition programs for effective teaching, and community involvement.

- The middle/junior high and high schools with higher restructuring scores are more likely to be using block schedules or some alternative, cooperative learning, multiage grouping, and to have a school to work transition program.

CLASSROOM PRACTICES

- Many classroom teachers indicated that they have moderately or substantially increased specific classroom practices because of the restructuring efforts. The most common changes include an increase in the use of technology, a focus on higher order thinking skills, group projects, cooperative learning, alternative assessment procedures, team teaching, interdisciplinary curricula, heterogeneous grouping, and student portfolios, along with a closer alignment of the curriculum with the instruction. This is coupled with a decrease in the usage of text books and lectures. However, these changes in classroom practices were made by teachers independent of the restructured status of the school.

RESTRUCTURING AND ACHIEVEMENT GAINS

- The single best predictor of CTBS achievement gains from 1993 through 1997 for the elementary and middle/junior high schools is the degree to which a school has been restructured. The best two predictors of achievement gains are the degree of restructuring and the Schoolwide Practice of outcome or performance based education. These two factors appear to work independent of a school's ethnic or socio-economic status and size.

- The differences in gains between the most restructured and least restructured schools are the equivalent of a school at the 50th percentile prior to restructuring moving to the 61st percentile for the Total Battery of the CTBS.

CONCLUSIONS

The degree to which schools have attempted to implement the restructuring process implied by HB1209 differs from school to school. In fact, while many of the schools have or are implementing many of the same

school-wide or classroom practices, there is also a wide variety of practices being used and to varying degrees. Most of these school-wide and classroom practices reflect the national trends in school reform. However, only a very few of these specific practices are related to academic achievement gains, and only one specific practice, outcome or performance based education, is related when the broader definition of restructuring is considered. Many of the classroom practices that have increased the most in use since 1993, such as the use of educational technology and group projects, have no relationship with achievement gains.

In this research we have attempted to distinguish between simply changing school or classroom practices and the broader concept of *restructuring* a school. The most significant finding in this study is that achievement gains have been greater in the elementary and middle/junior high schools where *restructuring* has taken place than in those schools where it has not. The best predictor of achievement gains is the Total Restructuring Score, and this is true regardless of the school's socio-economic status, ethnic composition, or size.

The Total Restructuring Score is a measure of the degree to which teachers, parents, and administrators have worked together to define precisely what their school will be, that is, what goals will be pursued, what beliefs will drive the decisions, what will be expected of the students, and how these ideas will be implemented. It is also a measure of the commitment to and ownership of the changes, and belief on the part of the teachers that what they are doing is important and that it will make a long-term difference in their classrooms and in the lives of their students. In the restructured schools a new ethos has emerged, and specific school-wide or classroom practices take a back seat to this important component of changing education. Where the new ethos has emerged since 1993, student achievement has increased. However, this conclusion is tempered by the need for continuing and long-term research in this area to determine the degree to which the troublesome Hawthorne effect may be at work to produce these findings.

These findings are very much supportive of the idea of "whole school" or "comprehensive school" reform programs being implemented elsewhere. Finally, these findings strongly suggest that the move toward decentralization of the schools is a positive step and should be continued. Without teacher and parental commitment, changing the school ethos or culture may be impossible.

Acknowledgements

We gratefully acknowledge the cooperation of those very busy school teachers who took time from their hectic schedules to complete the School Practices and Changes Questionnaire. From the beginning, this research was designed to rely on their insights into the nature and extent of the changes that have taken place in their schools. We would like to thank the administrators in the Arlington, Bainbridge Island, Bremerton, Enumclaw, Franklin Pierce, Granite Falls, Lakewood, Marysville, Monroe, North Kitsap, Northshore, Seattle, Snohomish, Steilacoom, Sumner, and White River School Districts who supported and approved of this research within their districts and schools.

We also want to acknowledge the role and assistance of Dr. Arthur Ellis and Dr. Christopher Sink, both of the School of Education at SPU, in the development of the Student Practices and Changes Questionnaire. A large number of the items in Section 5 of the SPCQ were written by Dr. Ellis. Dr. Sink was very helpful in the technical aspects of the factor analysis procedures. In addition, Dr. Larry Nyland, now an administrator in the Highline School District, aided in the initial planning stages of the project.

Finally, we want to acknowledge the financial support for this project provided by the School of Education at Seattle Pacific University. From the very beginning of the project, Dr. James Worthington, the former dean, gave both encouragement and financial support to the project. Dr. Mark Pitts, the current dean, has continued that support and has made the production and distribution of this report possible.

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School Restructuring and Student Achievement in Washington State:

Research Findings on the Effects of House Bill 1209 and School Restructuring on Western Washington Schools.

INTRODUCTION

The current efforts at educational reform in the state of Washington were begun formally in 1993 by the passing of Engrossed Substitute House Bill 1209 (HB 1209), also known as the Washington State Education Reform Act. This effort to improve Washington public schools is a response to national and local concerns raised in the preceding decade about the overall quality of American schools and their graduates. In an effort to improve the schools and to increase overall student learning, HB 1209, among other things, established a performance-based educational system with specific learning standards, encouraged decentralized decision-making and teacher empowerment, and attempted deregulation to allow individual school flexibility. Specific components of HB 1209 established the Commission on Student Learning charged with the development of learning requirements and assessment and school accountability procedures, while other components encouraged school-to-work transition, business partnerships, parental involvement and teacher training.

The reform efforts within Washington State generally reflect the school restructuring efforts that are currently progressing at various speeds throughout the United States. Van Slyke (1998) identified the "common threads" of contemporary school restructuring in the national literature, which included: the collaboration of teachers, administrators, parents and others in the purposes, goals and process of restructuring; clear student learning outcomes tied to revisions in assessment practices; curriculum and pedagogical revisions providing for basic skills and higher level thinking in "real-life" situations; systems of accountability; and a recognition of the importance of systemic changes for restructuring success. Each of these elements is visible in the current efforts within the State of Washington.

The research reported here was conducted during 1997 and 1998, and focused on the nature of restructuring and specific changes that have taken place in a sample of Washington schools and the degree to which those changes were related to student learning. The project was sponsored by the School of Education at Seattle Pacific University and involved the contributions of both SPU faculty and doctoral students.

Purpose of the Study

In recent decades broad educational reform efforts in the United States have had mixed results at best, and a number of writers have observed that schools remain remarkably unchanged despite numerous attempts to reform them. There are many critics of the current reform efforts, and it is yet to be determined if the school restructuring efforts of the 1990s will produce fundamental changes in the way schools operate and result in increased student learning. Our first purpose was to identify the types and degree of changes that have taken place in Washington State schools and classrooms since the passing of reform legislation in 1993. Our second purpose was to identify if, and if so to what extent, these changes were related to student outcomes, specifically increases in academic achievement.

RESEARCH PROCEDURES

Design Considerations

Over the last several years there has been an emerging body of research on the nature of school restructuring and its effects on schools and learning. While there are a number of issues involved with research on this topic, four are particularly pertinent to this study. First, researchers are limited in that it is impossible to use experimental research methodologies to establish clear cause and effect relationships. Consequently, researchers are limited to correlational and ex post facto designs, often times with many uncontrolled variables. Second, the types of educational changes being advanced under the moniker of restructuring are often times several steps removed from classroom practices. For example, the decentralization of the decision-making process does not automatically lead to classroom changes, and hence its affect on traditional educational outcomes such as standardized tests may be minimal, particularly in the short term. It is possible, and indeed probable, that many of the restructuring efforts must be evaluated with respect to their long-term effect, rather than their immediate impact on educational outcomes.

The third issue centers on the difficulty of determining exactly what specific "treatment" is being evaluated in the research. Central to the idea of restructuring is the freedom of schools to pursue educational practices based on local needs and resources. Consequently, schools which are "restructuring" appear to be following one of two general paths. One group of schools have adopted specific restructuring programs that are somewhat prescriptive or similar in their approaches. Examples of these types of restructuring programs include the Coalition of Essential Schools, Audrey Cohen College, Roots and Wings, Paideia, Accelerated Schools, Authentic Teaching, Modern Red School House, and Learning and Assessment for all Students (ATLAS). These restructuring programs channel schools in a general direction, while still allowing for local modifications. In research on these types of programs, the restructuring designs comprise the units of analysis. The research focuses on the fidelity to which the actual designs are implemented and eventually on the educational outcomes (for example, see Herman and Datnow,1997; Ross, Troutman, Gorgan, Maxwell, Laitinen, and Lower, 1997). The goal of such research is to inform about the process and outcomes of such efforts, to help fine-tune the efforts, and to identify the successful restructuring techniques.

A large number of schools however, have gone down a second path, and have ventured into restructuring independent of these more established programs, choosing instead to develop their own vision. They have usually borrowed from the wealth of restructuring literature, and have implemented a variety of approaches to educational restructuring. For these schools researchers are left with the very difficult challenge of developing an operational definition for a restructured school. The most common method for doing this is by counting the number of structural or curricular changes made at a school since a given date (for example, see Center on Organization and Restructuring of Schools, 1992; Lee and Smith, 1994). In this instance, the "treatment" can be quite varied from school to school.

The fourth issue for researchers, and closely related to the others, is how to define a restructured school. Policy makers are rightfully interested in whether or not state mandates and other restructuring efforts are actually leading to changes in schooling and to improvements in student outcomes. While the school restructuring efforts in any given state may be unique, they are also part of a nationwide effort, and it is clear that there are many common elements to restructuring across the country. In fact, a number of writers have articulated the similarities, and a good example is the work of Stringfield, Datnow, Herman,

and Berkeley (1997). In their examination of nine separate restructuring designs being pursued widely across the country, they concluded,

> A core element in all nine designs is active learning, in which students acquire knowledge by solving problems, interacting with classmates, writing reports, and completing projects, while spending considerably less time in passive listener roles. Characteristic features of all or most include cooperative learning, thematic units, student-centered instruction, integrated curricula, multi-age grouping, adoption of high-level performance standards, site-based school management, community and family connections to schools, and authentic assessment of student learning(p. 30-31).

Throughout the literature these elements continually emerge as important considerations for restructuring schools and the education process (e.g. Newman. & Wehlage1995; Newman and associates, 1996; Stringfield & Rossi,1995a; 1995b).

We considered these issues and addressed them in several ways. First, we recognized that we were working within the design limitations of causal-comparative and ex post facto research, meaning that our conclusions would be qualified by that and other limitations. Second, we wanted to develop a measure of changes in school and classroom practices and school restructuring that provided information about systemic or deep structural changes in the school, as well as curriculum and pedagogical practices. By doing so, we would be able to look at school restructuring from several different definitions or perspectives. Finally, we decided that we would not differentiate between those schools who have chosen to follow specific models or plans for restructuring (e.g. Coalition of Essential Schools) and those that attempted restructuring independently.

Measures of School Restructuring

The *School Practices and Changes Questionnaire* (SPCQ) was designed specifically for this research as a way to measure the nature and extent of changes that have taken place in the schools since 1993. The questionnaire asks for teachers' perceptions of how state mandated school reform efforts have affected their school, their classroom, their own teaching, and their students. The questionnaire consists of five sections: (1) general and demographic information; (2) new school-wide practices (3) individual classroom changes; (4) effects of restructuring on student learning; and (5) teacher perceptions of the restructuring efforts. The specific school-wide and classroom practices included on the SPCQ are shown in Table 1.The complete questionnaire, developmental procedures and psychometric qualities of the SPCQ are provided in Appendix 1.

Apart from the specific educational practices being implemented, we were also interested in ascertaining the degree to which restructuring efforts, in the view of the teachers, would actually lead to systemic and meaningful change in the lives of the students and what they are to learn. In addition, we wanted to know if they thought these changes would be lasting. The importance of these types of changes in schools has been examined by numerous writers. For example, Goodman (1995) wrote about "change without difference." He identified ameliorative or first order change that results in greater efficiency, but does not change the essence of the educational experience. In contrast, radical reform or second order change alters the underlying philosophical beliefs driving practice. Ellis and Fouts (1994) defined similar concepts comparing bureaucratic/centralized reform with

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authentic/fundamental reform. In addition, they also identified the energizing forces behind the restructuring efforts, contrasting goal-driven/participatory change with arbitrary/mandated change. Their model proposed that only goal-driven/participatory changes would result in lasting first order or authentic reform of education.

Based on these ideas and others from several theoretical models of systemic change and fundamental school reform found in the literature, over one hundred items were developed to which teachers could respond and that could serve as a measure of some of the more subtle changes and processes that have or are taking place in the schools and classrooms, as well as the degree of confidence teachers have in the restructuring process and resulting changes. We wanted to know if they thought that these efforts would truly make a difference.

Table 1
School-Wide and Classroom Practices Used on the School Practices and Changes Questionnaire

School-wide practices	Classroom practices
❑ Increased graduation requirements	❑ Group projects
❑ Recognition programs for effective teaching	❑ Use of textbooks
❑ Formal parental involvement program	❑ Cooperative learning
❑ Block scheduling or flexible time for courses	❑ Lectures
❑ Emphasis on staff development activities	❑ Interdisciplinary teaming
❑ Site-based councils and decision making	❑ Alternative assessment procedures
❑ Parent volunteer in the schools	❑ Interdisciplinary curriculum
❑ Interdisciplinary teaching teams	❑ Independent studies for students
❑ Multi-aged groupings or classes	❑ Focus o higher order thinking skills
❑ Cooperative learning focus	❑ Heterogeneous grouping for instruction
❑ Independent study encouraged/allowed	❑ Homogeneous grouping for instruction
❑ Certificates of master developed	❑ Use of student portfolios for assessment
❑ Non-graded programs or grouping	❑ Teaming with another teacher
❑ Outcome or performance based education	❑ Use of, or reliance on educational technology
❑ Total Quality Management principles used	❑ Curriculum alignment with instruction
❑ School to work transition programs	
❑ Community involvement programs	
❑ Open enrollment	
❑ Inclusions practices	
❑ Schools within schools	
❑ Alternative assessment strategies	

In the developmental process of the SPCQ the number of these items was eventually reduced using factor analysis and other procedures. Through this process, three separate, yet related constructs emerged from teacher responses to sixteen questions. These factors, their definitions and items are presented in Table 2.

For these 16 items in Section 5 of the SPCQ the response range is from 1 to 7, with 7 being strongly agree with the statement and 1 being strongly disagree. The response 4 is neutral or no opinion. Generally, for the Collaboration, Fundamental Change and Instructional Enhancement scales, a mean score above 4.0 represents a positive view of the affects of restructuring in that area and a mean score of below 4.0 represents a negative view. In addition, scale item response distributions may be examined individually to understand further the teachers' perceptions.

The data obtained from Section 2 of the SPCQ provided information on the specific school-wide practices that have been implemented since 1993, and can be taken as one measure of the degree to which a school has been restructured. However, as mentioned earlier, one problem with this type of definition is that many of these are "structural changes" (see Ellis and Fouts, 1994) and can be several steps removed from classroom practices and true fundamental reform. Nonetheless, they can serve as one measure of school change.

Operational definition of a restructured school. We chose to define a restructured school as one that has undergone changes that reflect second order or fundamental changes in school philosophy and practice, and where those changes are driven by a collaborative process and clearly defined goals. For our purposes the composite score of the Collaboration, Fundamental Change, and Instructional Enhancement scales is the Total Restructuring Score. Schools with higher Total Restructuring Scores are said to be more restructured than schools with lower scores.

Additional Measures

In addition to Section 5 of the SPCQ as a measure of school restructuring, the following measures were used for other school variables.

- School socio-economic status—the percent of students on free/reduced lunch.
- School ethnicity—the percent of the student body identified as White.
- School size—the number of student enrolled at the school.
- School-wide Practices—teacher responses to the specific practices listed in Section 2 of the SPCQ (see Table 1).
- Classroom Practices—teacher responses to the specific practices listed in Section 3 of the SPCQ (see Table 1).
- Perceptions of student learning—teacher responses to the specific student outcome areas listed in Section 4 of the SPCQ (see Appendix 1).
- Academic achievement—the school-wide results from the California Test of Basic Skills (CTBS) for 1993, 1996, and 1997. The CTBS is given yearly at the fourth and eighth grades and includes Reading, Language, Math, and Total Battery scores.

School and Teacher Sample

The sample of schools and teachers used in this study consisted of a sample of convenience based on the geographical proximity to the researchers and the willingness of school officials and teachers to participate in the study. While clearly not as desirable as random samples, samples of convenience are often times used in education because of the difficulties associated with random sampling, such as expense, accessibility, and willingness of those selected to participate. A good portion of research in education and the social sciences are done with convenience samples. Their use

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Table 2
School Practices and Changes Questionnaire
Section 5 Factor Definitions and Items

Collaboration Scale—measures the degree of participation in the decision-making process by teachers and parents, and if there were clear reasons and goals known to all participants as to why restructuring was taking place.

Items

1. I feel that parents understand why we restructured our school.
2. Teacher leadership has been a key element in our restructuring effort.
3. Our restructuring effort has been conducted on the basis of clearly articulated goals.
4. I feel that my input was relevant in the restructuring of my school.
5. Parents and committee members were involved in our restructuring process.
6. I feel that I understand the reasons why my school has been restructuring.

Fundamental Change Scale—measures the degree to which restructuring efforts have led, will, or will continue to lead, to a qualitatively different education for students, and changes that make a qualitative difference in what and how students are expected to learn.

Items

1. Students will be better prepared as a result of the changes made in restructuring this school.
2. Restructuring has promoted a sense of learning beyond the walls of the school.
3. The restructuring changes we have made in the last three years have changed what students are expected to learn and know.
4. I think the changes brought about by our restructuring efforts will be lasting changes.
5. Teachers are working together more to build a coherent, connected curriculum.
6. Our restructuring efforts have caused me to examine my own views of what constitutes a good education.

Instructional Enhancement Scale—measures the degree to which restructuring efforts have improved the classroom environment and instruction.

Items

1. The atmosphere in my classroom has improved as a result of restructuring.
2. I have more time to get to know my students as a result of restructuring.
3. I have more time to concentrate on important teaching and learning issues as a result of restructuring.
4. I feel that I am able to use more innovative teaching methods as a result of the changes made in restructuring my school.

is generally deemed acceptable in educational research because often times they provide the only possibility for research (McMillan & Schumacher,1997; Mason & Bramble, 1997; Gay, 1996). The use of convenience samples limits the external validity of the study, that is the degree to which the results can be generalized. When using a convenience sample it is

important to describe the pertinent characteristics of the sample and to be cautious in the conclusions regarding generalizations. It is also important to consider replication studies to validate any results.

School districts were pre-selected for participation in the process dependent on geographical location, district size, and researcher knowledge of the district. Those districts participating in the study were located in the Puget Sound region of Western Washington basically along the I-5 corridor both south and north of Seattle and on the Olympic Peninsula. Districts were selected from King, Snohomish, Pierce, and Kitsap counties and included Sumner, Steilacoom, White River, Enumclaw, Franklin Pierce, Seattle, Northshore, Marysville, Monroe, Snohomish, Lakewood, Arlington, Granite Falls, Bainbridge Island, Bremerton, and North Kitsap.

The degree of participation and implementation of the data collection varied within each district depending on local requirements for conducting research and on the willingness of a school's leadership to participate. From these districts, 111 schools agreed to participate, resulting in 2,197 usable questionnaires. In those analyses where the individual teacher was the unit of analysis, the sample consisted of all 2,197. Urban teachers and schools were underrepresented in this sample. In those analyses where the school was the unit of analysis, a teacher return rate of 50% was set as the level for inclusion of the school. Of the 111 schools, 75 schools met this standard, and consisted of 51 elementary, 14 middle/junior high, and 10 high schools. A list of these schools by district, the characteristics of the participating 75 schools and of the 2197 teachers from all schools are presented in Appendix 2.

Data Collection Procedures

In some cases, administration of the School Practices and Changes Questionnaire to classroom teachers took place at a faculty meeting with one of the researchers present. This method generally resulted in the greatest return and teacher participation. In other cases, the questionnaire was distributed to teachers in the school, resulting in considerably lower return rates. Data on achievement, enrollment, student ethnicity, and socioeconomic status (SES) (free/reduced lunch) was provided by the Office of the Superintendent of Public Instruction. Because the CTBS was not available for high schools, achievement gains/losses could only be calculated for the elementary and middle/junior high schools. Although CFAS data were available for high schools, the small number of high schools involved (10) did not allow for meaningful analysis.

FINDINGS

School Restructuring

The results from Section 5 of the SPCQ for the total sample of 75 schools are presented in Table 3. The results are fairly similar regardless of school level (elementary, middle, high). However, statistical analyses indicate that elementary schools have experienced a higher level of fundamental change than have high schools.[1]

An examination of the frequency distributions for the four restructuring scores indicates that, while generally positive, not all schools are making progress on restructuring. Frequency distributions of the school means on the Collaboration scale show that the large majority of schools are practicing some degree of collaborative decision making, with 75% of the schools with means of 4.5 or higher. However, about 10% of the schools have means of less than 4.0, indicating very little collaboration. Frequency distributions of the school means on the Fundamental Change scale show that at about 78% (>4.5) of the schools are making changes that they believe are important and long lasting, and only about 10% of the schools report that these changes are impacting

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their classroom instruction significantly at this point.

For the total sample of 75 schools, school size or ethnicity does not correlate with any of the four restructuring variables. For the total sample of 75 schools the percentage of students on free or reduced lunch (SES) correlates significantly with Fundamental Change (.26), Instructional Enhancement (.24), and Total Restructuring Score (.25). When controlling for ethnicity, the correlations for Fundamental Change and Total Restructuring remain significant. With the high schools removed from the sample, CTBS '93 Total Battery scores correlate significantly with Instructional Enhancement (-.39) and Total Restructuring (-.30), and the percentage of students on free or reduced lunch (SES) correlates significantly with Instructional Enhancement (.31).[2]

Table 3
SPCQ Section 5 Results for the Total Sample of 75 Participating Schools.

School Level		COLLAB	FUNDCH	INSTEN	RESTRU
Elementary Schools	N	51	51	51	51
	Mean	4.81121	4.90906	3.83553	13.55579
	Std. Deviation	.48759	.43628	.47474	1.24844
Middle/Junior High Schools	N	14	14	14	14
	Mean	4.70250	4.66443	3.72236	13.08929
	Std. Deviation	.41998	.43979	.44988	1.17703
High Schools	N	10	10	10	10
	Mean	4.64532	4.46374	3.99076	13.09982
	Std. Deviation	.48929	.51974	.75973	1.68217
Total	N	75	75	75	75
	Mean	4.76880	4.80402	3.83510	13.40792
	Std. Deviation	.47421	.47157	.51353	1.29913

School-wide Practices and Restructuring

Teacher responses to Section 2 of the SPCQ identified the school-wide practices that have been implemented since 1993. We defined a school-wide practice as being moderately or considerably implemented if 50% or more of the teachers responding from a school rated the practice as a 5 or 6 on the questionnaire. Similarly, we defined as beginning implementation if 50% or more of those teachers in a school rated the practice as a 4. The most common school-wide practices that have been moderately or considerably implemented are shown in Table 4. Those practices that are at the beginning implementation stages for the elementary schools and for the middle/junior high and high schools combined are shown in Table 5.

The relationship between the degree of restructuring as measured by Section 5 of the SPCQ and the specific school-wide practices are shown in Table 6. These correlations[3] indicate that the restructured elementary schools are more likely to have implemented a wide variety of school-wide practices, including alternative assessment strategies, coopera-

tive learning, staff development activities, recognition programs for effective teaching and parental and community involvement. They are also less likely to be just beginning site based managed strategies and staff development activities. The restructured middle/junior high and high schools are more likely to be using block schedules or some alternative, cooperative learning activities, school to work transition programs, and multiage grouping. Like the elementary schools, they are also less likely to be just beginning site based managed strategies and staff development activities.

In a related study using these data from this same sample of schools, Mork (1998) found that while a relationship existed between having a site-based council and the Collaboration score from the SPCQ, there were notable exceptions. Some schools with site-based councils had low collaboration scores, and other schools with no site-based councils had high collaboration scores. For example, in one particular elementary school, 93% of the teachers indicated a site-based council was present, but they tended to disagree that there was a high level of collaboration at the school. He also found that these distinctions were not related to school size or level. Finally, he concluded that the Collaboration variable was more important to change and perceptions of improved student outcomes than was just simply having a site-based council. Other researchers have also documented the importance of teacher involvement and participation in the reform process (e.g. Wohlstetter, Smyer, and Mohrman, 1994; Smylie, Lazarus, and Brownlee-Conyers(1996); King, Louis, Marks, and Peterson, 1996).

Table 4
School-wide Practices Implemented Since 1993

Level	Practice	Percentage of Schools Implementing
Elementary	Emphasis on staff development activities	75%
	Site-based councils and decision-making	73%
	Parent volunteer in the schools	59%
	Inclusion practices	51%
	Formal parental involvement program	33%
	Cooperative learning focus	28%
	Outcome or performance based learning	22%
	Alternative assessment strategies	10%
Middle/Junior High and High Schools	Emphasis on staff development activities	48%
	Site-based councils and decision-making	46%
	Parent volunteer in the schools	29%
	Inclusion practices	29%
	School to work transition programs	25%
	Block scheduling or flexible time for courses	25%
	Interdisciplinary team teaching	21%
	Formal parental involvement program	21%

Table 5
School-wide Practices At Beginning Implementation Stage

Level	Practice	Percentage of Schools Implementing
Elementary	Alternative assessment strategies	43%
	Community involvement programs	24%
	Outcome or performance based learning	16%
	Multi-aged groupings or classes	14%
	Formal parental involvement program	10%
	School to work transition programs	10%
Middle/Junior High and High Schools	Alternative assessment strategies	22%

Classroom Practices and Restructuring

In Section 3 of the SPCQ teachers identified the degree to which specific classroom practices had changed in their own classroom since 1993. The most common classroom practices that at least 25% of the sample indicated have moderately or substantially increased in usage in the classrooms because of restructuring are listed in Table 7. While there are not substantial differences between the responses of the elementary teachers and the middle/junior high and high school teachers, about 5-10% more of the elementary teachers did indicate an increased usage of alternative assessment strategies, interdisciplinary curriculum, focus on higher order thinking skills, heterogeneous grouping for instruction, and the use of student portfolios for assessment. Only two classroom practices were identified by 25% of the sample as having declined in usage: use of textbooks (39%) and lectures (37%).

The relationship between the degree of restructuring as measured by Section 5 of the SPCQ and the specific classroom practices are shown in Table 8. These correlations[4] indicate that the more highly restructured elementary schools are more likely to have increased their usage of alternative assessment procedures, to have aligned instruction with the curriculum, and to focus on higher order thinking skills. The more highly restructured middle/junior high and high schools are more likely to be using cooperative learning, heterogeneous grouping, group projects, and independent studies.

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Table 6

The Relationships Between Degree of Restructuring and School-wide Practices

Level	Practice	Correlation with Total Restructuring Score
Elementary	*Moderate or Considerable Implementation*	
	Alternative assessment strategies	.52**
	Cooperative learning focus	.51**
	Emphasis on staff development activities	.49**
	Recognition Program for effective teaching	.46**
	Parent volunteers in the schools	.42**
	Community involvement programs	.38**
	Independent study encouraged/allowed	.34*
	Open enrollment	.34*
	Site-based councils and decision making	.31*
	Total Quality Management principles used	.31*
	Increased graduation requirements	.31*
	Interdisciplinary teaching teams	.29*
	Beginning Implementation	
	Emphasis on staff development activities	-.50**
	Independent study encouraged/allowed	.41**
	Site-based councils and decision making	-.39**
	Total Quality Management principles used	.37**
Middle/Junior High and High Schools	*Moderate or Considerable Implementation*	
	Block scheduling or flexible time for courses	.56**
	Cooperative learning focus	.52**
	Multi-aged groupings or classes	.44*
	School to work transition programs	.41**
	Beginning Implementation	
	Site-based councils and decision making	-.48*
	Emphasis on staff development activities	-.44*

**significant at .01

* significant at .05

Table 7
Classroom Practices That Have Moderately or Substantially Increased Since 1993

Classroom Practice	Percentage of teachers indicating moderate or substantial increase in usage
Use of, or reliance on educational technology	49%
Focus on higher order thinking skills	49%
Curriculum alignment with instruction	46%
Group projects	44%
Cooperative learning	40%
Alternative assessment procedures	38%
Teaming with another teacher	37%
Interdisciplinary curriculum	35%
Heterogeneous grouping for instruction	26%
Use of student portfolios for assessment	25%

Note: The sample consisted of 1,141 elementary, 508 middle/junior high, and 548 high school teachers from 111 schools.

Restructuring and Achievement Gains

In the schools with the highest restructuring scores, teachers were more likely to believe that the changes in their schools have led to increases in student learning in all areas listed in section 4 of the SPCQ except PE/health. The correlations[5] between teachers' beliefs about increased learning and the Total Restructuring Score ranged from .63 for problem solving to .34 for writing. In fact, the perceptions of the teachers in the elementary and middle/junior high schools about increased learning were at least partially correct. Their views about increased learning correlated with actual CTBS achievement gains from 1993 to 1996/7: perceptions of reading with actual Reading gain (.36); perceptions of math with actual Math gain (.51); perceptions of problem solving with actual Reading gain (.39); and perceptions of problem solving with actual Math gain (.47).

The correlations for the restructuring variables, school size, school SES and ethnic composition, and academic achievement gains[6] between 1993 and 1996/7 as measured by the CTBS are presented in Table 9. These data are for the 65 elementary and middle/junior high schools only. All restructuring variables and the percentage of students on free or reduced lunch (SES) are significantly correlated with achievement gains. When controlling for school SES using partial correlation procedures, the restructuring variables correlations remain statistically significant.

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Table 8
The Relationships Between Degree of Restructuring and Classroom Practices

Level	Practice	Correlation with Total Restructuring Score
Elementary	*Moderate or Substantial Usage*	
	Alternative assessment procedure	.52**
	Curriculum alignment with instruction	.43**
	Focus on higher order thinking skills	.36**
	Independent studies for students	.33*
	Heterogeneous grouping for students	.33*
	Interdisciplinary curriculum	.29*
Middle/Junior High and High Schools	*Moderate or Substantial Usage*	
	Cooperative learning	.58**
	Heterogeneous grouping for instruction	.54**
	Group projects	.45*
	Independent studies for students	.41*

**significant at .01
* significant at .05

Using stepwise multiple regression procedures for the sample of 61 schools with data on all variables, the best predictor of achievement gains is the Total Restructuring Score (R=.49), accounting for 24.3% of the variance. When the SES variable is added to the equation (R=.57), the two variables account for 32% of the variance in achievement gains. When the multiple regression procedure is used on the data from the elementary schools, the Total Restructuring Score is the only predictor (R=.37). For the middle/junior highs, Collaboration (a component of the Total Restructuring Score) is the best predictor(R=.48), followed by SES (R= 55). The correlation between achievement gain and SES is positive, suggesting that gains were greater in the lower socio-economic schools. However, when the School-wide Practices variables are used in the regression, the best two predictors of academic gains are the Total Restructuring Score and the School-wide Practice variable of outcome or performance based education.[7]

Two of the School-wide Practices from Section 2 of the SPCQ are related to CTBS Reading and Total Battery achievement gains from 1993 to 1996/7. Outcome or performance based education correlates[8] with Reading gains (.36) and Total Battery gains (.36), and alternative assessment strategies correlates with Reading gains (.34). Of the classroom practices, cooperative learning focus correlates with Language gain (.37), Reading gain (.38), and Total Battery gain (.42).

To determine the *size* of the academic gains that might be due to the restructuring variable, we compared the gains of the top quartile of schools on the Total Restructuring Score with the gains of the bottom quartile of the schools on the Total Restructuring Score. The differences in gains between the most restructured and least restructured schools in standard deviation units based on National NCE scores are .17 (Language), .19 (Reading), .33 (Math), and .28 (Total

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Battery). These significant differences due to the restructuring variable are the equivalent of a school at the 50th percentile prior to restructuring moving to the 57th percentile in Language, to the 58th percentile in Reading, to the 63rd percentile in Math, and to the 61st percentile for the Total Battery.

Table 9
School Variables and CTBS Total Battery Achievement Gain Correlations

School Variable	Pearson r Correlation with Achievement Gain
SPCQ Total Restructuring Score	.49**
SPCQ Instructional Enhancement Score	.46**
SPCQ Fundamental Change Score	.46**
SPCQ Collaboration Score	.40**
SES (% of students on free/reduced lunch)	.39**
Ethnicity (% of students White)	-.24*
School Enrollment	-.22*

**significant at .01 level
*significant at .05 level

Summary of Findings

- The results on the SPCQ indicate that most schools have gone through some degree of restructuring, but that elementary schools have experienced a higher level of fundamental change than have high schools.

- While the results are generally positive, not all schools are making progress on restructuring. The large majority of schools, about 75%, are practicing some degree of collaborative decision making, while about 10% of the schools have experienced very little collaboration. Similarly, a large majority of schools have made changes that they believe are important and long lasting, but only about 10% of the schools report that these changes are impacting their instruction significantly at this point.

- The degree of changes that are being made at this sample of schools is independent of an individual school's ethnic composition, but seems to be more common among schools with lower achieving and lower income students.

- Specific changes being made at the schools differ, but the most common changes at the elementary level are an emphasis on staff development activities, site-based councils and decision-making, parent volunteer in the schools, inclusion practices, formal parental involvement programs, a cooperative learning focus, outcome or performance based

learning, and alternative assessment strategies.

- At the middle/junior high and high schools, the most common changes are an emphasis on staff development activities, site-based councils and decision-making, parent volunteer in the schools, inclusion practices, school to work transition programs, block scheduling or flexible time for courses, interdisciplinary team teaching, and formal parental involvement programs.

- The restructured elementary schools are more likely to have implemented a wide variety of school-wide practices, including alternative assessment strategies, cooperative learning, staff development activities, recognition programs for effective teaching, and community involvement.

- The restructured middle/junior high and high schools are more likely to be using block schedules or some alternative, cooperative learning, multiage grouping, and to have a school to work transition program.

- The more highly restructured schools are less likely to be just beginning site based management strategies and staff development activities.

- Many classroom teachers indicated that they have moderately or substantially increased specific classroom practices because of the restructuring efforts. The most common changes include an increase in the use of technology, focus on higher order thinking skills, group projects, cooperative learning, alternative assessment procedures, team teaching, the interdisciplinary curriculum, heterogeneous grouping, and student portfolios, along with a closer alignment of the curriculum with the instruction. This is coupled with a decrease in the usage of text books and lectures. However, these changes in classroom practices were made by teachers independent of the restructured status of the school.

- The single best predictor of CTBS achievement gains from 1993 through 1997 is the degree to which a school has been restructured, as measured by the three restructuring variables on Section 5 of the SPCQ. While a few School-wide Practices and classroom practices are related to achievement gains, the relationships are not as strong as are the SPCQ restructuring variables. The best two predictors of achievement gains for the elementary and middle/junior high schools are the degree of restructuring and the School-wide Practice of outcome or performance based education. These two factors appear to work independent of a school's ethnic or socio-economic status and size.

- The differences in gains between the most restructured and least restructured schools are the equivalent of a school at the 50th percentile prior to restructuring moving to the 57th percentile in Language, to the 58th percentile in Reading, to the 63rd percentile in Math, and to the 61st percentile for the Total Battery.

CONCLUSIONS

In 1993 Engrossed Substitute House Bill 1209 set in motion a series of activities throughout the State of Washington designed to change how and what students are taught and expected to learn. To accomplish these ends, schools were asked to envision new ways or structures of schooling. In this research we studied a sample of schools in Western Washington to see what has changed since this law was enacted five years ago. Our conclusions are cautious because we know that schooling and school practices can and do differ from location to location. What is true in Western Washington may not be at all true in other parts of the state. Yet, there are findings here that can be instructive—not because they necessarily show the status of reform throughout

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the state—but rather because the findings point in a certain direction that may truly enhance the educational process for children.

Among the sample of schools studied, we found that the degree to which schools have been successful at implementing the restructuring process implied by HB1209 differs from school to school. In fact, while many of the schools have or are implementing many of the same school-wide or classroom practices, there is also a wide variety of practices being used and to varying degrees. Most of these school-wide and classroom practices reflect the national trends in school reform. But interestingly, only a very few of these specific practices are related to academic achievement gains, and only one specific practice, outcome or performance based education, is related when the broader definition of restructuring is considered. Many of the classroom practices that have increased the most in use since 1993, such as the use of educational technology and group projects, have no relationship with achievement gains.

In this research we have attempted to distinguish between simply changing school or classroom practices and the broader concept of *restructuring* a school. The former can be done without the latter, and in fact has been done repeatedly throughout the recent history of American education. An example of this is our finding that a number of our schools had operating site-based councils, but low collaboration. However, restructuring schools implies a new vision, a rethinking and changing of the very philosophy about education, student learning and how schools should operate on a day to day basis. From this will probably flow naturally changes in school-wide and classroom practices.

The most significant finding in this study is that achievement gains have been greater in the elementary and middle/junior high schools where *restructuring* has taken place than in those schools where it has not. The best predictor of achievement gains is the Total Restructuring Score, and this is true regardless of the school's socio-economic status, ethnic composition, or size. While the more highly restructured schools are more likely to have implemented certain educational practices than are the less restructured schools, those more common practices alone are not as important as the ideas and actions embedded in the concept of restructuring.

Looking at the relatively abstract nature of the restructuring factor measured by the SPCQ is instructive. The Total Restructuring Score is a measure of the degree to which teachers, parents, and administrators have worked together to define precisely what their school will be, that is, what goals will be pursued, what beliefs will drive the decisions, what will be expected of the students, and how these ideas will be implemented. It is also a measure of the commitment to and ownership of the changes, and belief on the part of the teachers that what they are doing is important and that it will make a long-term difference in their classrooms and in the lives of their students. It appears that actual collaboration is more important than a site-based council. Clear and agreed-upon goals are more important than increased technology. Building a learning community is more important than rearranging classroom schedules. In short, in the restructured schools a new ethos has emerged, and specific school-wide or classroom practices take a back seat to this important component of changing education. Where the new ethos has emerged since 1993, student achievement has increased.

We must add one caveat to this conclusion. We have identified what appears to be a level of initial success of the restructuring efforts. However, it is possible that the achievement gains are not due to the restructuring per se, but rather to the enthusiasm and extra energy of the participants that accompanied the restructuring process. Because there is no immediate method to determine the degree to which these findings are due to this Hawthorne effect, research on the results of restructuring must be on-going to determine the long-term effects of restructuring on student learning.

These findings are very much supportive of the idea of "whole school" or "comprehensive school" reform programs being implemented elsewhere. For example, at the national level, federal funding has been made available through the Comprehensive School Reform Demonstration Program (Obey-Porter) in the form of competitive grants for whole school reform. However, these findings also suggest that restructuring is moving ahead slowly is some schools, and even not at all in others. The pace of change can be painfully slow. A recent Pew Forum on Standards-Based Reform(1998) report stated that turning around a school culture can be an "arduous, time-consuming challenge." "Dysfunctional schools develop over time a culture ... and lasting improvement is likely only if that culture is replaced with one that values quality, continuous learning, and human relationships." These findings suggest that simply changing a few schoolwide or classroom practices will not suffice.

Finally, these findings strongly suggest that the move toward decentralization of the schools is a positive step and should be continued. Without teacher and parental commitment, changing the school ethos or culture may be impossible. Ted Sizer (1996) noted that currently there are two movements attempting to reform schools, one starting at the top, the other at the bottom. "Systemic reform, even if exquisitely designed, can founder on the unwillingness or incompetence of teachers. Top-down plans are easy to sabotage: teachers can close their doors and do what they want"(p. 65). True educational restructuring can only happen if teachers and parents working together set the focus and direction of the efforts. But even reform starting at the bottom stands little chance of success without support from the top.

Endnotes:

[1] The Collaboration, Fundamental Change, Instructional Enhancement, and Total Restructuring mean scores for the three level of schools, elementary, middle/junior high, and high school, were analyzed using a general linear model MANOVA procedure, resulting in a significant Wilk's Lambda value, p=.000. Univariate tests on the Fundamental Change scores were significant, p=.010. Post hoc analyses showed that the elementary and high school groups differed on this variable, p=.02.

[2] In an attempt to partially control for any change of status on the SES and ethnicity variable over the period of time from 1993 to 1997, the value used for these two variables is the mean of the values for 1993 and 1997. The ethnicity variable is the percentage of white students at the school. The SES variable is the percentage of students at the school on free or reduced lunch. However, because there is a collinearity problem with the three variables of SES, ethnicity and CTBS scores, interpretation of these results is more difficult and must be done with caution. The ethnicity variable does not correlate with any of the restructuring variables, and this remains the case when using partial correlation techniques to control for SES and CTBS. SES does correlate positively with the restructuring variables, and thus, a positive correlation with the SES variable indicates that as the overall economic status of the student body goes down, the degree of restructuring that has taken place goes up. However, when using partial correlation techniques to control for the influence of ethnicity and CTBS, the SES correlations are no longer significant. Even the larger correlations of CTBS lose significance when SES is controlled and when SES and ethnicity are both controlled, but not when ethnicity is the lone control variable. Thus, when ethnicity is controlled, both SES and CTBS correlations with restructuring variables remain significant, and both SES and CTBS correlations with restructuring variables lose significance when the other variable is controlled for. This suggests that the two variables of SES and CTBS are the important correlates of the restructuring variables, meaning that more restructuring has taken place in the lower income, lower achieving schools than elsewhere.

[3] The rank order of the Total Restructuring Score for each school was correlated with the rank order of the percentage of teachers at that school indicating that the practice was moderately or considerably implemented. The correlation coefficients in Table 6 are Spearman rho values. The Spearman correlation was used because several of the distributions of the items under the School-wide Practices did not pass the test of normality.

[4] The rank order of the Total Restructuring Score for each school was correlated with the rank order of the

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percentage of teachers at that school indicating that the specific classroom practice was moderately or considerably implemented in his/her classroom. The correlation coefficients reported for these analyses are Spearman rho values. The Spearman correlation was used because several of the distributions of the items under the Classroom Practices did not pass the test of normality.

[5]The Total Restructuring Score for each school was correlated with the percentage of teachers at that school who indicated that learning had moderately or substantially increased in a particular area. The highest correlations were between this percentage of teachers and the Fundamental Change scale score: Writing (.45), Reading (.52), Problem Solving (.71), Math (.61), and communications skills (.54). Because of the number of correlations, a .01 alpha level was used for significance. These correlations seem to suggest that where teachers felt fundamental changes were being made, they were more likely to be focusing on these areas of the curriculum, and with some degree of success.

[6] The achievement gain was calculated for each school by using 1993 as the base year for the CTBS scores, the year HB1209 was passed, and the average of the CTBS scores from the years 1996 and 1997. The average for the two years was used as a way of reducing some of the random variability of results that occurs from year to year in school-wide testing. These correlations are Pearson r values.

[7] The difference between the R^2 values of the two regression equations is very small and not statistically significant, meaning that when combined with the Total Restructuring Score, the outcome or performance based education variable predicts only slightly more of the remaining variance than does SES. Nonetheless, SES is eliminated as a predictor, suggesting that where significant restructuring has taken place and outcome or performance based education is used, SES is not a factor in achievement gains..

It should be noted that in research where the results indicate that the greatest gains took place in the lowest achieving groups, the rival hypothesis of regression to the mean must be considered. For example, among these schools, the 1993 CTBS Total Battery scores correlate significantly with the gains from 1993 to 1996/7 with a zero-order correlation at -.55, the highest of the correlations obtained in the study. This means that over this period of time the first quartile of schools on achievement on the 1993 test gained on average 6.6 NCE points, while the top quartile lost on average .32 NCE points, changes that could be explained by the regression to the mean phenomenon. However, when the 1993 CTBS Total Battery score is controlled through partial correlation procedures, all of the SPCQ scores still correlate significantly with achievement gains, with Fundamental Change and the Total Restructuring Score the strongest, both at .41. When the 1993 CTBS score is entered into the stepwise regression procedure with the other school variables, it is entered first into the equation because of its highest zero-order correlation, followed then by Fundamental Change. These two variables predict 42.3% of the variance in achievement gains, about 10% more than any other group of variables. The β weights for these variables are -.47 and .35, indicating the relative importance of the variables for predicting achievement gain. But once again, the problem of collinearity arises because of the correlations between the predictor variables of 1993 test and SES (-.73) and ethnicity (.43), and enrollment (.29). Controlling for these three variables produces a partial correlation between the 1993 test and total gain of .41, a reduction in the strength of the correlation by approximately 47%. Therefore, the 1993 test score may, to some degree, be thought of as a surrogate for SES, ethnicity, and enrollment, and therefore probably not all of the variance predicted by the 1993 test is due to that test score alone. The predicted variance by the 1993 test appears to be a function of SES, ethnicity, enrollment, and the test itself, perhaps the regression phenomenon. It appears then, that while the 1993 test, and therefore regression to the mean, may explain some of the increase in test scores, it does not change the fact that the restructuring variables remain important for predicting achievement gains. What it does indicate however, is that some part of the increase in test scores may be due to the regression phenomenon. But since we can never control for all of the other variables associated with the 1993 test, we can never be sure.

[8]The rank orders of the gains for the CTBS achievement tests for each school were correlated with the rank order of the percentage of teachers at that school indicating that the School-wide Practice is moderately or considerably implemented. The correlation coefficients are Spearman rho values. The Spearman correlation was used for both the sets of calculations because several of the distributions of the items under the School-wide Practices and Classroom Practices did not pass the test of normality. Because of the large number of correlations being calculated an alpha level of .01 was used to reduce the Type I error rate. It should be noted however that outcome or performance based education also correlates with language gains (.30, p=.018) and math gains (.21, p=.11), and alternative assessment strategies also correlates with Language gain (.27, p=.03) and Total Battery gain (.32, p=.011). Of the Classroom Practices, cooperative learning focus also correlates with math gain (.32, p=.014). Site based councils and decision making and Total Quality Management principles each correlate positively with two CTBS gains at the .05 level.

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Appendix 1

The School Practices and Changes Questionnaire (SPCQ):

Development and Technical Information

Development of Sections 1-4 of the SPCQ

The School Practices and Changes Questionnaire (SPCQ) was developed in 1996-97 by a team of 7 researchers at Seattle Pacific University to assess the degree of school restructuring that has taken place in Washington schools since the passage of HB 1209 in 1993. To assess the degree of changes, the questionnaire asks for teachers' perceptions of how state mandated school reform efforts have affected their school, their classroom, their own teaching, and their students. The questionnaire consists of five sections: (1) general and demographic information; (2) new school wide practices (3) individual classroom changes; (4) affects of restructuring on student learning; and (5) teacher perceptions of the restructuring efforts.

In designing the first four sections of the questionnaire a review of the literature on school restructuring was conducted and from this literature the most common school and classroom practices associated with school restructuring were identified. From this master list the team of seven researchers reached agreement on 63 items to be included in the initial field test and the response format to be used. These 63 items and the response format were then field tested with a total of 23 elementary and secondary classroom teachers from various schools in Western Washington. In addition, these first four sections of the questionnaire were critiqued by two educational experts, a professor of educational administration and a practicing public school principal. Comments and suggestions from these sources were used to eliminate, combine, or revise items. The final version of the SPCQ contains 8 demographic and general information items, 21 school wide practice items, 15 classroom practice items, and 10 student learning items.

Development and Psychometric Information for Section 5 of the SPCQ

In addition to assessing the number and type of specific educational practices that are being used in Washington schools, we were also interested in understanding some of the more subtle changes and processes that taking place in the schools and classrooms, as well as the degree of satisfaction and confidence teachers have in the restructuring process and resulting changes. After a second literature review and consideration of numerous theoretical models of school restructuring efforts, procedures, and desired outcomes, an initial list of 119 statements to which teachers could respond on a strongly agree/strongly disagree format were developed. These 119 statements were then reduced to 95 statements and administered to a total of 22 secondary and elementary teachers in Western Washington. Feedback from these teachers were used to rephrase or alter items for clarity, and at this point, all 95 items were retained for inclusion in a larger field test.

Questionnaires containing the 95 items in Likert response format were administered to 226 public elementary and secondary teachers in Western Washington. Of the 226 questionnaires administered, 7 were eliminated because of incomplete or patterned responses or because the questionnaire was completed by someone of than a regular classroom teacher. This resulted in a usable sample of 219 questionnaires.

Analysis of the teachers' responses on the 95 items was for the intent of reducing the total number of items, and to identify constructs useful in evaluating the restructuring efforts. The first step in reducing the number of items was to eliminate all those items that had a .5 or lower item-total correlation. Eighteen items from the questionnaire were eliminated with this procedure. The remaining 77 items were then analyzed by both principal components and principal axis factor analysis procedures. The most satisfactory factor solution was obtained using the principal components method with varimax rotation, resulting in three factors and 16 total items. The cumulative percentage of the three factors accounts for 64.7 percent of the common variance. Factor 1 has six items and accounts for 23.4% of the variance. Factor 2 has 6 items and accounts for 22.5% of the variance. Factor 3 has 4 items and accounts for 18.8% of the variance. Alpha reliability for the entire 16 items on

section 5 of the SPCQ is .92. Alpha reliability for Factor 1, Factor 2, and Factor 3 is each .87 The rotated factor loadings are presented in Table 1.

The six items loading on Factor 1 center on the participation in the decision-making process by teachers and parents, and that there were clear reasons and goals known to all participants as to why restructuring was taking place. This construct appears to be very similar to one of the perspectives on restructuring articulated by Ellis and Fouts (1994). They identify the energizing forces behind restructuring and describe two opposing models, one Goal-Driven / Participatory and the other Arbitrary/ Mandated. The former model is inclusive and change driven by focused and agreed-upon goals by all interested parties. The latter model is change by top-down mandates independent of agreed-upon needs, and seen as arbitrary or random in nature. Ellis and Fouts theorize that the Goal-Driven/Participatory model produces changes in schools that are most likely to be meaningful and long-lasting. The six items loading on Factor 1 closely reflect this Goal-Driven/Participatory idea. This factor has been named the ***Collaboration Scale***.

The six items loading on Factor 2 appear to center on the degree to which restructuring efforts have, will, or will continue, to lead to a qualitatively different education for students. This construct appears to be very similar to a second perspective on restructuring articulated by Ellis and Fouts (1994). They differentiate between the outcomes of educational change that lead to alterations in the school bureaucracy and outward structure of the school, and change that leads to a qualitatively different educational experience for the student. These two types of changes they call Bureaucratic/Centralized restructuring and Authentic/Fundamental restructuring. Bureaucratic/ Centralized restructuring involves changes in the time schedule, school calendar, administration and decision-making processes, and other outward visible structural changes. However, these types of changes do not necessarily mean that students are learning anything differently than before. Authentic/Fundamental restructuring, on the other hand, are changes that "flow from the very essence of education," and are changes that make a qualitative difference in what and how students are expected to learn. This type of change may be accompanied by changes in the bureaucracy or structure of schools, but those changes alone do not assure that Authentic/Fundamental restructuring has taken place. Items loading on Factor 2 ask teachers the degree to which restructuring has led to this type of Authentic/Fundamental change. This factor has been named the ***Fundamental Change Scale***.

The four items loading on Factor 3 are concerned with the degree to which restructuring efforts have improved the classroom environment and instruction. This factor has been named the ***Instructional Enhancement Scale.***

The three scales intercorrelations range from .54 to .58. These moderate correlations indicate that the scales measure related dimensions of teachers' perceptions about school restructuring. If enhanced collaboration, enhanced instructional and environmental classroom conditions, and fundamental changes in what and how much students learn are desirable goals for educational restructuring, then the composite of these three scales may be seen as an indication of the overall degree to which a school has been restructured. The ***Total Restructuring Score*** is the sum of the three scale scores from Section 5 of the SCPQ.

Interpreting scale scores. For section 5 of the SPCQ the response range is from 1 to 7, with 7 being strongly agree with the statement and 1 being strongly disagree. The response 4 is neutral or no opinion. Generally, for the Collaboration, Fundamental Change and Instructional Enhancement scales, a mean score above 4.0 represents a positive view of the affects of restructuring in that area and a mean score of below 4.0 represents a negative view. In addition, scale item response distributions may be examined individually to understand further the teachers' perceptions. Reference

Ellis, A.K. & Fouts, J. T. (1994). *Research on School Restructuring*. Larchmont, NY: Eye on Education.

Table 1
Section 5 of the School Practices and Changes Questionnaire
16 Items and Factor Loadings

Section 5 Item	Loadings Factor 1	Factor2	Factor 3
Factor 1—**Collaboration Scale**			
I feel that parents understand why we restructured our school.	.78		
Teacher leadership has been a key element in our restructuring effort.	.76	.32	
Our restructuring effort has been conducted on the basis of clearly articulated goals.	.72		
I feel that my input was relevant in the restructuring of my school.	.71		
Parents and committee members were involved in our restructuring process.	.70		
I feel that I understand the reasons why my school has been restructuring.	.66		
Factor 2—**Fundamental Change Scale**			
Students will be better prepared as a result of the changes made in restructuring this school.	.33	.78	
Restructuring has promoted a sense of learning beyond the walls of the school.		.76	
The restructuring changes we have made in the last three years have changed what students are expected to learn and know.		.73	
I think the changes brought about by our restructuring efforts will be lasting changes.	.41	.71	
Teachers are working together more to build a coherent, connected curriculum.		.71	
Our restructuring efforts have caused me to examine my own views of what constitutes a good education.		.62	.33
Factor 3—**Instructional Enhancement Scale**			
The atmosphere in my classroom has improved as a result of restructuring.			.80
I have more time to get to know my students as a result of restructuring.			.79
I have more time to concentrate on important teaching and learning issues as a result of restructuring.			.78
I feel that I am able to use more innovative teaching methods as a result of the changes made in restructuring my school.			.77

Seattle Pacific University

SCHOOL OF EDUCATION -

SCHOOL PRACTICES AND CHANGES QUESTIONNAIRE

Thank you for participating in this research intended to evaluate the nature and extent of changes taking place in Washington schools. Your personal responses will be kept confidential.

Section 1: General and Demographic Information

School district: _____

Name of school: _____

Number of years you've taught at this school:

- ❒ less than 1 year
- ❒ 1 to 2 years
- ❒ less than 2, but more than 4 years
- ❒ 4 to 10 years
- ❒ more than 10 years

Teaching level:

❒ elementary ❒ middle/jr. high ❒ high school

Primary subject taught if secondary school: _____

Other subjects taught: _____

Total number of years teaching:

❒ less than 5 years ❒ 5 to 10 years ❒ 11 to 20 years ❒ more than 20 years

Your age:

❒ 20-25 ❒ 26-34 ❒ 35-50 ❒ 51+

Gender:

❒ male ❒ female

Member of site-based council:

❒ yes ❒ no ❒ site-based council not operating

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Section 2: Educational Practices Resulting from Restructuring

To the best of your knowledge which of the following have been implemented as **new practices** in your school since school restructuring was mandated in 1993? Circle the number that most closely matches your response.

	Uncertain	Used prior to restructuring mandates	No Implement-ation	Beginning Implement-ation	Moderate Implement-ation	Considerable Implement-ation
Increased graduation requirements	1	2	3	4	5	6
Recognition programs for effective teaching	1	2	3	4	5	6
Formal parental involvement program	1	2	3	4	5	6
Block scheduling or flexible time for courses	1	2	3	4	5	6
Emphasis on staff development activities	1	2	3	4	5	6
Site-based councils and decision making	1	2	3	4	5	6
Parent volunteer in the schools	1	2	3	4	5	6
Interdisciplinary teaching teams	1	2	3	4	5	6
Multi-aged groupings or classes	1	2	3	4	5	6
Cooperative learning focus	1	2	3	4	5	6
Independent study encouraged/allowed	1	2	3	4	5	6
Certificates of mastery developed	1	2	3	4	5	6
Non-graded programs or grouping	1	2	3	4	5	6
Outcome or performance based education	1	2	3	4	5	6
Total Quality Management principles used	1	2	3	4	5	6
School to work transition programs	1	2	3	4	5	6
Community involvement programs	1	2	3	4	5	6
Open enrollment	1	2	3	4	5	6
Inclusion practices	1	2	3	4	5	6
Schools within schools	1	2	3	4	5	6
Alternative assessment strategies	1	2	3	4	5	6

Section 3: Restructuring and Classroom Changes

We are interested in determining if and how your teaching methods have changed in the last three years. Of the following classroom practices, which have declined in usage, remained about the same (including not being used at all previously), or increased in usage? Circle the number that is closest to your response.

	Uncertain	Declined in usage	No change or never used	Small increase in usage	Moderate increase in usage	Substantial increase in usage
Group projects	1	2	3	4	5	6
Use of textbooks	1	2	3	4	5	6
Cooperative learning	1	2	3	4	5	6
Lectures	1	2	3	4	5	6
Interdisciplinary teaming	1	2	3	4	5	6
Alternative assessment procedures	1	2	3	4	5	6
Interdisciplinary curriculum	1	2	3	4	5	6
Independent studies for students	1	2	3	4	5	6
Focus on higher order thinking skills	1	2	3	4	5	6
Heterogeneous grouping for instruction	1	2	3	4	5	6
Homogeneous grouping for instruction	1	2	3	4	5	6
Use of student portfolios for assessment	1	2	3	4	5	6
Teaming with another teacher	1	2	3	4	5	6
Use of, or reliance on educational technology	1	2	3	4	5	6
Curriculum alignment with instruction	1	2	3	4	5	6

Section 4: Restructuring and Student Outcomes

In your opinion, how have the changes in school and classroom practices in the last three years affected student learning in the following areas?

	Uncertain	Learning has declined	No change	Small increase	Moderate increase	Substantial increase
Writing skills	1	2	3	4	5	6
Reading ability	1	2	3	4	5	6
Problem solving skills	1	2	3	4	5	6
Math skills	1	2	3	4	5	6
Specific content knowledge	1	2	3	4	5	6
Communication skills	1	2	3	4	5	6
Science	1	2	3	4	5	6
Art, drama and/or music	1	2	3	4	5	6
Social studies	1	2	3	4	5	6
PE/health	1	2	3	4	5	6

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Section 5: Teacher Perceptions

In 1993 the state legislature mandated that a variety of changes be made in Washington Schools. A wide range of educational practices have been or are being implemented under this "restructuring" mandate. Below are a series of questions pertaining to the restructuring efforts at your school. Please circle the number that most closely matches your response.

		Strongly disagree	Disagree	Somewhat disagree	Neutral or no opinion	Somewhat agree	Agree	Strongly agree
1	I feel that my input was relevant in the restructuring of my school.	1	2	3	4	5	6	7
2	I feel that I understand the reasons why my school has been restructuring.	1	2	3	4	5	6	7
3	I feel that parents understand why we restructured our school.	1	2	3	4	5	6	7
4	Parents and committee members were involved in our restructuring process.	1	2	3	4	5	6	7
5	Teacher leadership has been a key element in our restructuring effort.	1	2	3	4	5	6	7
6	Our restructuring effort has been conducted on the basis of clearly articulated goals.	1	2	3	4	5	6	7
7	The atmosphere in my classroom has improved as a result of restructuring.	1	2	3	4	5	6	7
8	I feel that I am able to use more innovative teaching methods as a result of the changes made in restructuring my school.	1	2	3	4	5	6	7
9	I have more time to concentrate on important teaching and learning issues as a result of restructuring.	1	2	3	4	5	6	7
10	The restructuring changes we have made in the last three years have changed what students are expected to learn and know.	1	2	3	4	5	6	7
11	Teachers are working together more to build a coherent, connected curriculum.	1	2	3	4	5	6	7
12	I think the changes brought about by our restructuring efforts will be lasting changes.	1	2	3	4	5	6	7
13	Restructuring has promoted a sense of learning beyond the walls of the school.	1	2	3	4	5	6	7
14	Our restructuring efforts have caused me to examine my own views of what constitutes a good education.	1	2	3	4	5	6	7
15	Students will be better prepared as a result of the changes made in restructuring this school.	1	2	3	4	5	6	7
16	I have more time to get to know my students as a result of restructuring.	1	2	3	4	5	6	7

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Appendix 2

Participating Districts and Schools

District	School
Arlington	Arlington HS
	Post MS
	Presidents
	Eagle Creek
	Trafton
Bainbridge Island	Bainbridge Island HS
	Woodward MS
	Ordway
	Blakely
Bremerton	Bremerton HS
	Bremerton JH
	Crownhill
	Naval
	Viewridge
	Olympic View
	Armin Jahr
	Kitsap Lake
	West Hills
Enumclaw	Enumclaw HS
	J.J. Smith
	Sunrise
	Black Diamond
	Westwood
Franklin Pierce	Ford MS
	Central Avenue
	Brookdale
	James Sales
	Harvard
	Collins
	Elmhurst
Granite Falls	Granite Falls HS
	Granite Falls MS
	Monte Cristo
	Mountain Way
Lakewood	Lakewood MS
Marysville	Marysville JH
	Liberty
	Shoultes
Monroe	Monroe MS
	Frank Wagner MS
	Maltby
	Salem Woods
North Kitsap	Gordon
Northshore	Lockwood
	Hollywood Hills
	East Ridge
	Crystal Springs
Seattle	Ingraham HS
	Whitman MS
	Rainier View
Snohomish	Snohomish Fr. campus
	Centennial MS
	Cascade View
	Central/Emerson Prim.
	Central/Emerson Interm.
	Dutch Hill
	Riverview
	Totem Falls
Steilacoom	Steilacoom HS
	Saltars
Sumner	Sumner HS
	Sumner JH
	Lakeridge
	Victor Falls
	Crestwood
	Bonney Lake
	Emerald Hills
	Maple Lawn
	Liberty Ridge
	McAlder
White River	White River HS
	White River MSl
	Elkridge
	Wilkeson
	Foothills

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Characteristics of 10 Participating High Schools

	Minimum	Maximum	Mean	Std. Deviation
Enrollment	317.50	1335.00	912.2000	375.9554
Average % free/reduced lunch	.06	.41	.1830	.1064
Average % students–White	.37	.96	.8299	.1882
CFAS Math %ile '97	43.60	53.70	50.6625	3.7036
CFAS Science %ile '97	44.10	53.20	50.0500	2.7635
CFAS History %ile '97	44.10	50.00	48.1875	2.2504
CFAS English %ile '97	44.70	52.10	48.7500	2.3299

Characteristics of 14 Participating Junior High/Middle Schools

	Minimum	Maximum	Mean	Std. Deviation
Enrollment	379.00	1129.00	753.7500	207.8975
Average % free/reduced lunch	.07	.43	.2371	.1073
Average % students–White	.52	.95	.8745	.1193
CTBS Language %ile '96	47.400	60.400	51.88571	3.59997
CTBS Math %ile '96	44.700	59.300	51.77857	4.62322
CTBS Reading %ile '96	47.900	61.000	52.11429	3.62191
CTBS Total Battery %ile '96	46.300	60.400	51.99286	3.80798

Characteristics of 51 Participating Elementary Schools

	Minimum	Maximum	Mean	Std. Deviation
Enrollment	141.00	921.00	495.8137	128.7810
Average % free/reduced lunch	.02	.81	.3273	.1959
Average % students-White	.24	.96	.8571	.1300
CTBS Language%ile '96	37.100	68.500	52.05000	6.89961
CTBS Math %ile '96	39.600	71.600	52.65417	8.31407
CTBS Reading %ile '96	35.800	68.500	51.86458	6.31643
CTBS Total Battery %ile '96	37.700	70.900	52.80208	7.43180

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Characteristics of Teacher Sample

TEACHING LEVEL

		Frequency	Percent
Valid	elementary	1141	51.9
	middle/junior high	508	23.1
	high school	547	24.9
	Total	2196	100.0
Missing	System	1	.0
Total		2197	100.0

GENDER

		Frequency	Percent
Valid	male	637	29.0
	female	1534	69.8
	Total	2171	98.8
Missing	System	26	1.2
Total		2197	100.0

AGE

		Frequency	Percent
Valid	20-25	50	2.3
	26-34	416	18.9
	35-50	1250	56.9
	51+	460	20.9
	Total	2176	99.0
Missing	System	21	1.0
Total		2197	100.0

TEACHING LEVEL

		Frequency	Percent
Valid	elementary	1141	51.9
	middle/junior high	508	23.1
	high school	547	24.9
	Total	2196	100.0
Missing	System	1	.0
Total		2197	100.0

OF YEARS AT CURRENT SCHOOL

		Frequency	Percent
Valid	less than 1 year	200	9.1
	1-2 years	197	9.0
	more than 2, but less than 4 years	233	10.6
	4 to 10 years	936	42.6
	more than 10 years	625	28.4
	Total	2191	99.7
Missing	System	6	.3
Total		2197	100.0

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